

ABSTRACT OF THE DISCLOSURE

A vacuum insulated heater assembly is provided for heating fluids and solids. The assembly includes an inner member, for example, a quartz glass tube with a low-emissivity conductive coating that produces heat when connected to external power. The inner member is attached to end caps that are attached to ends of, for example, an outer quartz glass tube, thus positioning the inner member within the outer tube. With a vacuum drawn within the space between the two tubes, the resulting heat radiates toward the center of the inner member, thus providing a thermos bottle type of construction. The fluid can be heated as it passes through the inner tube. If the inner member is not completely coated then heat would radiate toward the center of the inner member, pass through its uncoated portion, and then pass through the outer tube, where objects can be heated.